

CLAIMS

1. A method of shielding a circuit device,
comprising:

(a) providing a circuit board on which an
5 electronic component has mounted and which has a
ground connection portion;

(b) inserting an entire portion of said
circuit board into a shield pack having a sack shape,
said shield pack having an insulating layer as an
10 innermost layer and an electric conductive layer as an
outermost layer; and

(c) contacting said insulating layer of said
shield pack with said electronic component and said
circuit board,

-- ----- 15- wherein ~~said ground connection portion of~~ ~~-----~~
said circuit board is connected to said electric
conductive layer of said shield pack.

2. The shielding method of a circuit device
20 according to claim 1, wherein said (c) contacting step
comprises:

(d) reducing an internal capacity of said
shield pack.

25 3. The shielding method of a circuit device
according to claim 2, wherein said circuit board is
further comprises a ground connection terminal

connected to said ground connection portion, and
said ground connection terminal breaks
through said shield pack to be connected with said
electric conductive layer during said (c) contacting
5 step.

4. The shielding method of a circuit device
according to claim 3, wherein said ground connection
terminal comprises:

10 a tip portion having a conical shape; and
a base portion connected to said tip portion,
and

said base portion has a sectional area which
is smaller than a bottom plane of said cone such that
15 said base portion does not project from the bottom
plane of said cone.

5. The shielding method of a circuit device
according to claim 4, wherein said base portion of
20 said ground connection terminal has a height which is
substantially equal to a thickness of said shield
pack, and

when said tip portion breaks through said
shield pack, the bottom plane of said cone is
25 connected to said electric conductive layer.

6. The shielding method of a circuit device

according to claim 2, further comprising:

connecting said ground connection portion and
said electric conductive layer by passing an electric
conductive connection component through said ground
5 connection portion between said shield pack and said
circuit board, after said insulating layer of said
shield pack is fit with said electronic component and
said circuit board.

10 7. The shielding method of a circuit device
according to claim 6, wherein said circuit board has a
through-hole formed in said ground connection portion,
said through-hole is filled with an electric
conductor connected to said ground connection portion,
15 and

said connection component passes through said
through-hole to connect said ground connection portion
with said electric conductive layer.

20 8. The shielding method of a circuit device
according to claim 6 or 7, wherein said connection
component is used to fix said circuit board contained
within said shield pack to a housing, and
said housing has an electric conductive
25 portion connected to said electric conductive layer.

9. The shielding method of a circuit device

according to any of claims 3 to 5, wherein said (d)
reducing step comprises:

vacuum-sucking air contained in said shield
pack such that said insulating layer of said shield
5 pack contacts said electronic component and said
circuit board.

10. The shielding method of a circuit device
according to any of claims 3 to 5, wherein an adhesive
10 agent is coated on at least a portion of said circuit
board and at least a portion of an outer surface of
said electronic component, and

said (d) reducing step comprises:

vacuum-sucking air contained in said shield
15 pack such that said insulating layer of said shield
pack contacts said electronic component and said
circuit board.

11. The shielding method of a circuit device
20 according to any of claims 3 to 5, wherein said shield
pack is made of thermal shrinkage material, and

said (d) reducing step comprises:

heating said shield pack such that said
insulating layer of said shield pack contacts said
25 electronic component and said circuit board.

12. The shielding method of a circuit device

according to any of claims 3 to 5, wherein an adhesive agent is coated on at least a portion of said circuit board and at least a portion of an outer surface of said electronic component,

5 said shield pack is made of thermal shrinkage material, and

 said (d) reducing step comprises:

 heating said shield pack such that said insulating layer of said shield pack contacts said
10 electronic component and said circuit board.

13. An electromagnetically shielded circuit device comprising:

 a circuit board on which an electronic
15 component has been mounted and which has a ground connection portion;

 a sack-shaped shield pack which covers an entire portion of said circuit board, said shield pack having an insulating layer as an innermost layer and
20 an electric conductive layer as an outermost layer;
and

 an electric conductive connection component which passes through said shield pack to said circuit board to connect said ground connection portion to
25 said electric conductor layer of said shield pack.

14. The electromagnetically shielded circuit

device according to claim 13, wherein said connection component is a ground connection terminal which is previously fixedly provided to said ground connection portion of said circuit board.

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15. The electromagnetically shielded circuit device according to claim 14, wherein said ground connection terminal has a tip portion having a conical shape and a base portion connected to said tip

10 portion, and

said base portion has a sectional area which is smaller than a bottom plane of said cone such that said base portion does not project from the bottom plane of said cone.

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16. The electromagnetically shielded circuit device according to claim 15, wherein said base portion of said ground connection terminal has a height which is substantially equal to a thickness of

20 said shield pack, and

the bottom plane of said cone is connected to said electric conductive layer under in a state that said tip portion breaks through said shield pack.

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17. The electromagnetically shielded circuit device according to claim 13, wherein said circuit board has a through-hole formed in said ground

connection portion,

said through-hole is filled with an electric conductor connected to said ground connection portion, and

5 said connection component passes through said through-hole to connect said ground connection portion with said electric conductive layer.

18. The electromagnetically shielded circuit
10 device according to claim 13 or 17, wherein said connection component is a vis, and is used to fix said circuit board contained within said shield pack to a housing, and

said housing has an electric conductive
15 portion connected to said electric conductive layer.